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EXAMINER	
PAPE, ZACHARY	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

TH

Office Action Summary	Application No.	Applicant(s)	
	10/805,875	YATSKOV ET AL.	
	Examiner	Art Unit	
	Zachary M. Pape	2835	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 April 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13 and 16-61* is/are pending in the application.

4a) Of the above claim(s) *35* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13,16-29,32-34,36-55 and 57-61* is/are rejected.

7)☐ Claim(s) *30,31 and 56* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/30/2007 has been entered.

Specification

2. The objection to the specification has been withdrawn in view of the amendment thereto.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-13, 16-21, 25, 26, 28, 29, 32, 33, 36-48, 57-61 are rejected under 35 U.S.C. 102(b) as being anticipated by Miller et al. (US 6,305,180 – hereinafter, "Miller").

With respect to claim 1, Miller teaches a computer system comprising: a chassis (Generally depicted in Fig 2a) having an air inlet and an air outlet; an air mover (17a)

associated with either the air inlet or the air outlet and establishing a forced air flow path within the chassis; a first computer module compartment (Between respective element 1b) positioned in the chassis and in the forced air flow path so that heat from the first compartment is transferred to the forced air flow; a second computer module compartment (Between respective element 1b) positioned in the chassis and in the forced air flow path; an air-to-fluid heat exchanger (1b) having a plurality of heat transfer surfaces (Pipes, Column 9, Lines 13-19) therein, and positioned in the chassis between the first and second compartments in the forced air flow path such that the forced air flows through the heat exchanger and across the heat transfer surfaces and adapted to remove thereby removes a portion of the heat therefrom (See Fig 2a, see also Column 9, Lines 13-33).

With respect to claim 16, Miller further teaches a computer system comprising: a chassis (Generally depicted in Fig 2a); an air mover (6, 17a) coupled to the chassis to induce a flow of air along a flow path within the chassis; a first computer module compartment (Between respective element 1b) positioned in the air flow path within the chassis so that heat from the first compartment is transferred to the air flow (Column 9, Lines 1-7); and an air-to-fluid heat exchanger (1b) positioned at least proximate to the first computer module compartment and in the air flow path the heat exchanger including at least one internal fluid passage (Pipes, P) configured to carry a working fluid having a boiling point in the heat exchanger between about 45° F. and about 75° F (Column 10, Lines 59-63) to thereby remove a portion of the heat from the air flow (Column 9, Lines 13-33).

With respect to claim 26, Miller further teaches a computer system comprising: a chassis (Generally depicted in Fig 2a); an air mover (6, 17a) coupled to the chassis to induce a flow of air along a flow path within the chassis; a first computer module compartment (Adjacent 1b) positioned in the chassis and in the air flow path; a first air-to-liquid heat exchanger (1b) positioned in the chassis and in the air flow path, wherein the first heat exchanger includes at least one internal fluid passage (Pipes, P) configured to carry a working fluid that absorbs heat from in the air flow path; and a second heat exchanger (another of 1b) positioned external to the chassis and in fluid communication with the first heat exchanger, wherein the second heat exchanger is configured to cool the working fluid (Column 9, Lines 13-33, see also Fig 2a).

With respect to claim 33, Miller further teaches a computer system comprising: a chassis (Generally depicted in Fig 2a) having an air inlet and an air outlet; an air mover (6, 17a) positioned in flow communication with the chassis, wherein the air mover is configured to move air along a forced air flow path through at least a portion of the chassis; a first computer module compartment (Between respective element 1b) positioned in the air flow path in the chassis; a first plurality of computer modules (2a) held in the first computer module compartment at least partially in the air flow path; a second computer module compartment (Between respective element 1b) positioned in the air flow path in the chassis and spaced apart from the first computer module compartment; a second plurality of computer modules (2a) held in the second computer module compartment at least partially in the air flow path; and an air-to-fluid heat exchanger (1b) positioned in the air flow path in the chassis, wherein the heat

exchanger is positioned at least partially downstream of the first computer module compartment and at least partially upstream of the second computer module compartment, and wherein the heat exchanger includes at least one opening (13) through which the air mover moves air to transfer heat from the air to the fluid (Column 9, Lines 13-33).

With respect to claim 57, Miller further teaches a method for dissipating heat generated by a computer module in a chassis (Generally depicted in Fig 2a), comprising: placing an air-to-fluid heat exchanger (1b) in the chassis; forcing air past the computer module (2a) in the chassis to transfer heat from the computer module to the of air; moving a working fluid through an internal passage (Pipes, P) of a the heat exchanger; moving at least a the portion of the heated air through the heat exchanger to transfer heat from the portion of air to the working fluid; and controlling the working fluid (Via 50) to maintain the working fluid at least proximate to the phase transition state while flowing through the internal passage (Where 50 can reduce liquid flow such that the working fluid remains proximate to the phase transition state).

With respect to claim 2, Miller further teaches that the heat exchanger (1b) is positioned at least partially downstream of the first computer module compartment and at least partially upstream of the second computer module compartment (See Fig 2a).

With respect to claims 3 and 41, Miller further teaches that the heat exchanger (1b) includes at least one internal fluid passage (Pipes, P) configured to carry a working fluid.

With respect to claims 4 and 42, Miller further teaches that the heat exchanger (1b) includes at least one internal fluid passage (Pipes, P) configured to carry a working fluid having a boiling point in the heat exchanger between about 45° F. and about 75° F (Column 10, Lines 59-63).

With respect to claim 5, Miller further teaches that the heat exchanger (1b) includes at least one opening (13) through which air can pass from at least proximate the first computer module compartment to at least proximate the second computer module compartment.

With respect to claim 6, Miller further teaches that the heat exchanger (1b) is positioned at least partially between the first and second computer module compartments in the chassis (See Fig 2a).

With respect to claim 7, Miller further teaches that the heat exchanger (1b) is a first heat exchanger, and wherein the computer system further comprises: a third computer module compartment (Where another of 2a is placed) positioned in the chassis and in the air flow path; and a second heat exchanger (Another of 1b) positioned in the chassis and in the air flow path, wherein the second heat exchanger is positioned at least partially downstream of the second computer module compartment and at least partially upstream of the third computer module compartment (See Fig 2a).

With respect to claim 8, Miller further teaches that the heat exchanger (1b) is a first heat exchanger, and wherein the computer system further comprises: a third computer module compartment (Where another of 2a is placed) positioned in the chassis and in the air flow path; and a second heat exchanger (Another of 1b)

positioned in the chassis and in the air flow path, wherein the second heat exchanger is positioned at least partially downstream of the second computer module compartment and at least partially upstream of the third computer module compartment (See Fig 2a), wherein the first, second, and third computer module compartments, and the first and second heat exchangers, are arranged vertically in the chassis (See Fig 2a).

With respect to claim 9, Miller further teaches that the first computer module compartment, the second computer module compartment, and the heat exchanger (1b) are arranged vertically in the chassis (See Fig 2a).

With respect to claims 10 and 17, Miller further teaches that the first computer module compartment (Between respective 1b) is configured to hold at least a first computer module (2a) oriented edgewise with respect to the air flow path (See Fig 2a).

With respect to claims 11, 28, and 32, Miller further teaches that the first computer module compartment (Between respective 1b) is configured to hold a plurality of computer modules (2a) oriented edgewise with respect to the air flow path (See Fig 2a).

With respect to claims 12, 29, 39, Miller further teaches that the first computer module compartment is configured to hold at least a first computer module oriented edgewise with respect to the air flow path toward a first side of the heat exchanger, and wherein the second computer module compartment is configured to hold at least a second computer module oriented edgewise with respect to the air flow path toward a second side of the heat exchanger opposite to the first side of the heat exchanger (See Fig 2a).

With respect to claims 13 and 43, Miller further teaches a first computer module (2a) carried by the first computer module compartment, wherein the first computer module includes at least a first computer processor (Column 8, Lines 28-31, "components"); and a second computer module (Another of 2a) carried by the second computer module compartment, wherein the second computer module includes at least a second computer processor (Column 8, Lines 28-31, "components").

With respect to claim 18, Miller further teaches that the first computer module compartment is position at least proximate to a first side of the heat exchanger (See Fig 2a) and wherein the chassis further includes a second computer module compartment (Between respective element 1b) positioned in the air flow path in the chassis at least proximate to a second side of the heat exchanger opposite to the first side of the heat exchanger (See Fig 2a).

With respect to claim 19, Miller further teaches that the heat exchanger (1b) is a first heat exchanger, and wherein the computer system further comprises: a third computer module compartment (Between respective element 1b) positioned in the air flow path in the chassis; and a second heat exchanger (1b) positioned at least partially between the second and third computer module compartments in the air flow path in the chassis, the second heat exchanger (1b) including at least one internal fluid passage (Pipes, P) configured to carry a working fluid having a boiling point in the second heat exchanger between about 45° (Column 10, Lines 59-63).

With respect to claim 20, Miller further teaches an air mover (6, 17a) configured to move air through at least one opening (13) in the heat exchanger along the air flow path in the chassis.

With respect to claim 21, Miller further teaches a working fluid, wherein the working fluid is carried by the internal fluid passage of the heat exchanger (Column 10, Lines 33-63).

With respect to claim 25, Miller further teaches that the heat exchanger (1b) is positioned upstream from the first computer module compartment in the chassis (See Fig 2a).

With respect to claim 36, Miller further teaches that the air mover (17a) is carried by the chassis (See Figs 2a, where the heat exchanger (1b) carries 17a which in turn is carried by the chassis).

With respect to claim 37, Miller further teaches that the heat exchanger (1b) is a first heat exchanger, and wherein the computer system further comprises: a third computer module compartment (Between respective element 1b) positioned in the air flow path in the chassis and spaced apart from the second computer module compartment; a third plurality of computer modules (2a) held in the third computer module compartment at least partially in the air flow path; and a second heat exchanger (1b) positioned in the air flow path in the chassis, wherein the second heat exchanger is positioned at least partially downstream of the second computer module compartment and at least partially upstream of the third computer module compartment, and wherein

the heat exchanger includes at least one opening (13) through which the air mover moves air (See Fig 2a).

With respect to claim 38, Miller further teaches that the air mover (17a), the first computer module compartment, the second computer module compartment, and the heat exchanger (1b) are arranged vertically with respect to the chassis (See Fig 2a).

With respect to claim 40, Miller further teaches that each of the first plurality of computer modules (2a) is individually carried by the first computer module compartment (Fig 2a), wherein each of the first plurality of computer modules includes at least a first computer processor (Column 8, Lines 28-31 – "components"), wherein each of the second plurality of computer modules (2a) is individually carried by the second computer module compartment (Fig 2a), and wherein each of the second plurality of computer modules includes at least a second computer processor (Column 8, Lines 28-31 – "components").

With respect to claims 44-48, the method steps recited in the claims are inherently necessitated by the device structure as taught by the Miller reference.

With respect to claim 58, Miller further teaches moving a working fluid through an internal passage of a heat exchanger includes moving a working fluid having a boiling point between about 45° F. and about 75° F (Wherein at the appropriate pressure, water can have a boiling point between about 45F and 75F).

With respect to claim 59, Miller further teaches moving a working fluid through an internal passage of a heat exchanger includes moving a working fluid having a boiling

point between about 50° F. and about 65° F (Wherein at the appropriate pressure, water can have a boiling point between about 50F and 65F).

With respect to claim 60, Miller further teaches that the computer module is a first computer module, and wherein the method further comprises, after moving the portion of air through the heat exchanger, moving the portion of air past a second computer module (2a) in the chassis to transfer heat from the second computer module to the portion of air (See Column 9, Lines 13-33, see also Fig 2a).

With respect to claim 61, Miller further teaches that controlling the working fluid to maintain the working fluid at least proximate to the phase transition state includes controlling the pressure of the working fluid (Where 50, a pump, controls the working fluid and the pump controls the pressure of the working fluid).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller in view of Khrustalev et al. (US 2003/0010477 – hereinafter, "Khrustalev").

With respect to claims 22-23, Miller teaches the limitations of claim 16 and further teaches that the working fluid is carried by the internal fluid passage (Pipes, P) of the heat exchanger, but fails to teach that the working fluid is a refrigerant where the

first portion of the working fluid is in a liquid state and a second portion of the working fluid is in a gaseous state in the heat exchanger. Khrustalev teaches a working fluid which is a refrigerant [0039] wherein a first portion of the working fluid is in a liquid state and a second portion of the working fluid is in a gaseous state (The working fluid will be both in a liquid and gaseous state in the heat exchanger since the heat from the board (9) is causing the fluid to change phases). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Khrustalev with that of Miller to provide an alternate equivalent medium for removing heat from the air. In the event that one of the pipes (P) were to break, a refrigerant will evaporate rather than spill onto the components and cause damage.

5. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mill in view of Iizuka et al. (US 6,258,293 – hereinafter, "Iizuka").

With respect to claim 24, Miller teaches the limitations of claim 26 above but is silent as to the working fluid has a boiling point in the first heat exchanger between about 50F and about 65F. Iizuka teaches the conventionality of using a refrigerant having a boiling point between 50 and 65F (Column 1, Lines 10-11). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Iizuka with that of Miller to provide adequate heat transfer capabilities.

6. Claims 27, 34, 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller in view of Salt (US 5,603,375).

With respect to claim 27, Miller teaches the limitations of claim 26 above but is silent as to the working fluid has a boiling point in the first heat exchanger between about 45F and about 75F. Salt teaches utilizing a working fluid which has a boiling point in a heat exchanger of between about 45F and 75F (Column 2, Lines 1-5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Salt with that of Miller to provide adequate heat transfer capabilities.

With respect to claim 34, Miller teaches the limitations of claim 33 above and further teaches that the air movers move air horizontally through the chassis but is silent as to the vertical configuration of the chassis with the air mover being positioned toward the top of the chassis to move air up through the chassis, however it would have been obvious to one of ordinary skill in the art at the time the invention was made to rearrange the chassis 90 degrees such that the heat exchangers 1b are arranged vertically since it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikse, 86 USPQ 70. In the present case one would be motivated to arrange the chassis vertically such that it would fit within a room.

With respect to claims 50, the method steps recited in the claim are inherently necessitated by the device structure as taught by the Miller and Salt references.

7. Claims 49, 51, 54, and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller in view of James et al. (US 4,756,164, hereinafter, "James").

With respect to claims 49 and 51, Miller teaches the limitations of claim 44 as per above but is silent as to the working fluid being a refrigerant which boils in the heat exchanger. James teaches a heat exchanger which has a refrigerant that boils to remove heat from a system (Column 4, Lines 12-16). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of James with that of Miller to provide an alternate equivalent means of transferring heat from a device. In the event that one of the pipes (P) were to break, a refrigerant will evaporate rather than spill onto the components and cause damage.

With respect to claim 54, Miller further teaches that the computer module is a first compute module, and wherein the method further comprises, after moving the portion of air through the heat exchanger, moving the portion of air past a second computer module in the chassis to transfer heat from the second computer module to the portion of air (See Fig 2a of Miller).

With respect to claim 55, Miller further teaches that the computer modules is a first computer module, the working fluid is a first working fluid, and the heat exchanger is a first heat exchanger having a first internal passage, and wherein the method further comprises: after moving the portion of air through the first heat exchanger, moving the portion of air past a second computer module in the chassis to transfer heat from the second computer module to the portion of air; moving a second working fluid through a

second internal passage of a second heat exchanger positioned at least proximate to the second computer module in the chassis; and moving the portion of air through the second heat exchanger to transfer heat from the portion of air to the second heat exchanger and boil at least a portion of the second working fluid in the second internal passage (See Fig 2a of Miller, see Column 4, Lines 12-16 of James regarding the boiling of a fluid in a heat exchanger).

8. Claim 52 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miller in view of James and further in view of Salt (US 5,603,375).

With respect to claim 52, Miller in view of James teaches the limitations of claim 51 above but is silent as to the working fluid has a boiling point in the first heat exchanger between about 45F and about 75F. Salt teaches utilizing a working fluid which has a boiling point in a heat exchanger of between about 45F and 75F (Column 2, Lines 1-5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Salt with that of Miller and James to provide adequate heat transfer capabilities. Additionally, in the event that one of the pipes (P) were to break, a refrigerant will evaporate rather than spill onto the components and cause damage.

9. Claim 53 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miller in view of James and further in view of Iizuka.

With respect to claim 53, Miller in view of James teaches the limitations of claim 51 above but is silent as to the working fluid has a boiling point in the first heat exchanger between about 45F and about 75F. Salt teaches utilizing a working fluid which has a boiling point in a heat exchanger of between about 45F and 75F (Column 2, Lines 1-5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Salt with that of Miller to provide adequate heat transfer capabilities. Additionally, in the event that one of the pipes (P) were to break, a refrigerant will evaporate rather than spill onto the components and cause damage.

Allowable Subject Matter

10. Claims 30, 31, and 56 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

With respect to claim 30, the allowability resides in the overall structure of the device as recited in dependent claim 30 and at least in part because claim 30 recites, " the second heat exchanger is spaced apart from the chassis".

The aforementioned limitations in combination with all remaining limitations of claims 26 and 30 are believed to render said claim 30 patentable over the art of record.

Miller teaches (In Fig 2a) a second heat exchanger (1b) and further teaches that the heat exchanger is positioned against the chassis, not spaced apart from it.

With respect to claim 31, the allowability resides in the overall structure of the device as recited in dependent claim 31 and at least in part because claim 31 recites, " a controller.. to maintain the working fluid in phase transition within the first heat exchanger".

The aforementioned limitations in combination with all remaining limitations of claims 26 and 31 are believed to render said claim 31 patentable over the art of record.

Miller teaches (In Fig 5) a primary and secondary cooling loop but fails to teach a controller coupled to the second heat exchanger (Pipes, P) to maintain the working fluid in phase transition within the first heat exchanger. Further the Examiner does not believe such a limitation is merely an obvious variation of the present invention to Miller.

With respect to claim 56, the allowability resides in the overall structure of the device as recited in dependent claim 56 and at least in part because claim 56 recites, " moving a first portion of a refrigerant received from a refrigeration source.. moving a second portion of the refrigerant received from the refrigerant source".

The aforementioned limitations in combination with all remaining limitations of claims 51, 55, 56 are believed to render said claim 56 patentable over the art of record.

Miller teaches (In Fig 5) a primary and secondary cooling loop but fails to teach a refrigerant source which is tapped to provide the working fluid for the first and second internal passages.

Response to Arguments

11. Applicant's arguments with respect to claims 1-13, 16-61 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zachary M. Pape whose telephone number is 571-272-2201. The examiner can normally be reached on Mon. - Thur. (7:00am - 5:30pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jayprakash Gandhi can be reached at 571-272-3740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ZMP

JN Gandhi 6/6/07

JAYPRAKASH GANDHI
SUPERVISORY PATENT EXAMINER